IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.	:	10/658,703
Conf. No.:	:	2306
Applicant	:	Santi Kulprathipanja, et al.
Filed	:	September 9, 2003
Title	:	Phenyl-Alkane Compositions Produced Using An Adsorptive Separation Section
Art Unit	:	1797
Examiner	:	Singh, Prem C.
Docket No.	:	108297

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

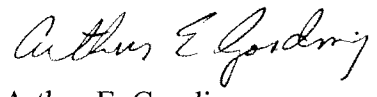
July 2, 2008

RESUBMISSION IN RESPONSE TO NON-COMPLIANT APPEAL BRIEF UNDER 37 C.F.R. 41.37

Dear Sir:

Attached is a resubmission of Section V of the Appeal Brief in response to the defective nature of Section V of the Appeal Brief.

Respectfully submitted,



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APPEAL BRIEF (SECTION V)

Before

Board of Patent Appeals and Interferences

in the

United States Patent & Trademark Office

In re:

U.S. Application No.	10/658,703
Filed:	September 9, 2003
Inventor:	Santi Kulprathipanja et al.
Assignee:	UOP LLC
Examiner:	Prem C. Singh
Art Unit:	1797

V. Summary of Claimed Subject Matter

The invention, as presented in claim 1, is a product by process, where the product is a modified alkylbenzene (MAB). The MAB is produced by a process wherein a lightly branched acyclic paraffin, having from 8 to 28 carbons (pg. 10, lines 17-19), is selectively adsorbed on a silicalite adsorbent (pg. 21, lines 28-29) to separate the lightly branched acyclic paraffin from more highly branched paraffins. The lightly branched acyclic paraffin is desorbed from the silicalite adsorbent using a C5-C8 cyclo paraffin, normal paraffin, or branched paraffin (pg. 22, lines 3-5), and passed to a dehydrogenation zone where the lightly branched acyclic paraffin is dehydrogenated to form a lightly branched monoolefin (pg. 28, lines 6-9). The lightly branched monoolefin is passed with a phenyl compound to an alkylation zone (pg. 34, lines 7-11) comprising a solid molecular sieve alkylation catalyst (pg. 43, lines 1-6), thereby generating the MAB (pg. 46, lines 8-9, 17-19). The molecular sieve alkylation catalyst is a physically constraining catalyst that limits the isomerization of the lightly branched alkyl group to produce a high quality modified alkylbenzene.

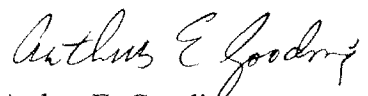
The invention, as presented in claim 16, is a product by process, where the product is a modified alkylbenzene sulfonate (MABS). The MABS is produced by a process wherein a lightly branched acyclic paraffin, having from 8 to 28 carbons (pg. 10, lines 17-19), is selectively adsorbed on a silicalite adsorbent (pg. 21, lines 28-29) to separate the lightly branched acyclic paraffin from more highly branched paraffins. The lightly branched acyclic paraffin is desorbed from the silicalite adsorbent using a C5-C8 cyclo paraffin, normal paraffin, or branched paraffin (pg. 22, lines 3-5), and passed to a dehydrogenation zone where the lightly branched acyclic paraffin is dehydrogenated to form a lightly branched monoolefin (pg. 28, lines 6-9). The lightly branched monoolefin is passed with a phenyl compound to an alkylation zone (pg. 34, lines 7-11) comprising a solid molecular sieve alkylation catalyst (pg. 43, lines 1-6), generating a phenyl-alkane product stream (pg. 46, lines 8-9, 17-19). The phenyl-alkane product stream is contacted with a sulfonated agent to produce a phenyl-alkane sulfonic acid (pg. 50, lines 12-19), which is then neutralized to produce the MABS (pg. 50, lines 23-27).

The invention, as presented in claim 17, is a product by process, where the product is a modified alkylbenzene (MAB). The MAB is a monomethyl paraffin that is produced by a process wherein a monomethyl paraffin is selectively adsorbed on a silicalite adsorbent to separate the monomethyl paraffin from a raffinate stream comprising more branched paraffins (pg. 16, lines 21-24; pg. 21, lines 27-29). The monomethyl paraffin is desorbed from the silicalite adsorbent using a C5-C8 cyclo paraffin, normal paraffin, or

branched paraffin (pg. 22, lines 3-5), and passed to a dehydrogenation zone where the monomethyl paraffin is dehydrogenated to form a monomethyl olefin (pg. 28, lines 6-9; pg. 62, lines 4-15). The monomethyl olefin is passed with a benzene feedstock (pg. 16, lines 1-2) to an alkylation zone (pg. 34, lines 6-11) comprising a solid molecular sieve alkylation catalyst (pg. 43, lines 1-6), thereby generating a phenyl alkane comprising molecules having one phenyl portion and one aliphatic alkyl portion, where the alkyl portion has 2 or 3 primary carbon atoms and no quaternary carbon atoms, except where the carbon atom bonds with a carbon on the phenyl group (pg. 55, lines 6-13). The molecular sieve alkylation catalyst is a physically constraining catalyst that limits the isomerization of the lightly branched alkyl group to produce a high quality modified alkylbenzene.

The invention, as presented in claim 21, is a product by process, where the product is a modified alkylbenzene sulfonate (MABS). The MABS is produced by a process wherein a feed mixture comprising aromatic compounds is enriched in lightly branched paraffins (pg. 27, lines 26-29). The lightly branched paraffins are dehydrogenated to generate a stream comprising lightly branched monoolefins (pg. 28, lines 23-26). The lightly branched monoolefins are passed with a phenyl compound to an alkylation zone (pg. 34, lines 6-11; pg. 37, lines 16-21) comprising a solid molecular sieve alkylation catalyst (pg. 38, lines 8-9; pg. 43, lines 1-6), thereby generating a modified alkylbenzene (MAB) product (pg. 46, lines 10-13). The MAB is reacted with a sulfonating agent to generate a phenyl-alkane sulfonic acid (pg. 50, lines 12-19). The phenyl-alkane sulfonic acid is neutralized to produce a phenyl-alkane sulfonate product (pg. 50, lines 23-27), where the phenyl-alkane sulfonate has no quaternary carbon atom, except where any quaternary carbon atom is bonded by a carbon-carbon bond to the phenyl group (pg. 55, lines 6-13). The molecular sieve alkylation catalyst is a physically constraining catalyst that limits the isomerization of the lightly branched alkyl group to produce a high quality modified alkylbenzene.

Respectfully submitted,



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